

SEQUENCE LISTING

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 OGI, KAZUHIRO

<120> NOVEL POLYPEPTIDE

<130> 46342/56686

<140> 09/979,546

<141> 2001-11-20

<150> PCT/JP00/03221

<151> 2000-05-19

<150> JP 11-140229

<151> 1999-05-20

<160> 71

<170> PatentIn Ver. 2.1

<210> 1

<211> 125

<212> PRT

<213> Homo sapiens

<400> 1

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Ala	Ala	Ala	Asp	Ala	Arg	Gly	Arg	Ala	Gly	His	Arg	Ser	Ala	Ala	Ala	35	40	45	
Ser	Asn	Leu	Ser	Gly	Leu	Ser	Leu	Gln	Glu	Ala	Gln	Gln	Ile	Leu	Asn	50	55	60	
Val	Ser	Lys	Leu	Ser	Pro	Glu	Glu	Val	Gln	Lys	Asn	Tyr	Glu	His	Leu	65	70	75	80
Phe	Lys	Val	Asn	Asp	Lys	Ser	Val	Gly	Gly	Ser	Phe	Tyr	Leu	Gln	Ser	85	90	95	
Lys	Val	Val	Arg	Ala	Lys	Glu	Arg	Leu	Asp	Glu	Glu	Leu	Lys	Ile	Gln	100	105	110	
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<210> 2
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 <213> Homo sapiens

<400> 2

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			20					25					30		
Lys	Gly	Ile	Ile	Gly	Leu	Met	Ser	Arg	Leu	Ser	Pro	Asp	Glu	Ile	Leu
		35				40					45				
Gly	Leu	Leu	Ser	Leu	Gln	Val	Leu	His	Glu	Glu	Thr	Ser	Gly	Cys	Lys
	50				55						60				
Glu	Glu	Val	Lys	Pro	Phe	Ser	Gly	Thr	Thr	Pro	Ser	Arg	Lys	Pro	Leu
65					70					75					80
Pro	Lys	Arg	Lys	Asn	Thr	Trp	Asn	Phe	Leu	Lys	Cys	Ala	Tyr	Met	Val
				85					90					95	
Met	Thr	Tyr	Leu	Phe	Val	Ser	Tyr	Asn	Lys	Gly	Asp	Trp	Phe	Thr	Phe
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Ser	Ser	Gln	Val	Leu	Leu	Pro	Leu	Leu							
		115					120								

<210> 3
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 <213> Homo sapiens

<400> 3

Met	Lys	Phe	Val	Pro	Cys	Leu	Leu	Leu	Val	Thr	Leu	Ser	Cys	Leu	Gly
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			20					25					30		
Phe	His	Phe	Gln	Thr	Gly	Gly	Arg	Asp	Ser	Cys	Thr	Met	Arg	Pro	Ser
			35				40					45			
Ser	Leu	Gly	Gln	Gly	Ala	Gly	Glu	Val	Trp	Leu	Arg	Val	Asp	Cys	Arg
	50				55						60				
Asn	Thr	Asp	Gln	Thr	Tyr	Trp	Cys	Glu	Tyr	Arg	Gly	Gln	Pro	Ser	Met
65				70						75					80
Cys	Gln	Ala	Phe	Ala	Ala	Asp	Pro	Lys	Ser	Tyr	Trp	Asn	Gln	Ala	Leu
				85					90					95	
Gln	Glu	Leu	Arg	Arg	Leu	His	His	Ala	Cys	Gln	Gly	Ala	Pro	Val	Leu

100 105 110
 Arg Pro Ser Val Cys Arg Glu Ala Gly Pro Gln Ala His Met Gln Gln
 115 120 125
 Val Thr Ser Ser Leu Lys Gly Ser Pro Glu Pro Asn Gln Gln Pro Glu
 130 135 140
 Ala Gly Thr Pro Ser Leu Ser Pro Lys Ala Thr Val Lys Leu Thr Gly
 145 150 155 160
 Ala Thr Gln Leu Gly Lys Asp Ser Met Glu Glu Leu Gly Lys Ala Lys
 165 170 175
 Pro Thr Thr Gly Pro Thr Ala Lys Pro Thr Gln Pro Gly Pro Arg Pro
 180 185 190
 Gly Gly Asn Glu Glu Ala Lys Lys Lys Ala Trp Glu His Cys Trp Lys
 195 200 205
 Pro Phe Gln Ala Leu Cys Ala Phe Leu Ile Ser Phe Phe Arg Gly
 210 215 220

<210> 4
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 <213> Homo sapiens

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 Met Gly Pro Val Arg Leu Gly Ile Leu Leu Phe Leu Phe Leu Ala Val
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 His Glu Ala Trp Ala Gly Met Leu Lys Glu Glu Asp Asp Asp Thr Glu
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 Arg Leu Pro Ser Lys Cys Glu Val Cys Lys Leu Leu Ser Thr Glu Leu
 35 40 45
 Gln Ala Glu Leu Ser Arg Thr Gly Arg Ser Arg Glu Val Leu Glu Leu
 50 55 60
 Gly Gln Val Leu Asp Thr Gly Lys Arg Lys Arg His Val Pro Tyr Ser
 65 70 75 80
 Val Ser Glu Thr Arg Leu Glu Glu Ala Leu Glu Asn Leu Cys Glu Arg
 85 90 95
 Ile Leu Asp Tyr Ser Val His Ala Glu Arg Lys Gly Ser Leu Arg Tyr
 100 105 110
 Ala Lys Gly Gln Ser Gln Thr Met Ala Thr Leu Lys Gly Leu Val Gln
 115 120 125
 Lys Gly Val Lys Val Asp Leu Gly Ile Pro Leu Glu Leu Trp Asp Glu
 130 135 140

Pro Ser Val Glu Val Thr Tyr Leu Lys Lys Gln Cys Glu Thr Met Leu
145 150 155 160

Glu Glu Phe Glu Asp Ile Val Gly Asp Trp Tyr Phe His His Gln Glu
165 170 175

Gln Pro Leu Gln Asn Phe Leu Cys Glu Gly His Val Leu Pro Ala Ala
180 185 190

Glu Thr Ala Cys Leu Gln Glu Thr Trp Thr Gly Lys Glu Ile Thr Asp
195 200 205

Gly Glu Glu Lys Thr Glu Gly Glu Glu Glu Gln Glu Glu Glu Glu
210 215 220

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Pro Lys Leu Asp Arg Glu Asp Leu
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<210> 5

<211> 173

<212> PRT

<213> Homo sapiens

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Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu Thr Val
20 25 30

His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln Ser Thr Glu
35 40 45

Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser Pro Gly Glu His
50 55 60

Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser Asn Leu Ser Val Pro
65 70 75 80

Ile Gly Arg Phe Gln Asn Arg Val His Leu Met Gly Asp Ile Leu Cys
85 90 95

Asn Asp Gly Ser Leu Leu Leu Gln Asp Val Gln Glu Ala Asp Gln Gly
100 105 110

Thr Tyr Ile Cys Glu Ile Arg Leu Lys Gly Glu Ser Gln Val Phe Lys
115 120 125

Lys Ala Val Val Leu His Val Leu Pro Glu Glu Pro Lys Glu Leu Met
130 135 140

Val His Val Gly Gly Leu Ile Gln Met Gly Cys Val Phe Gln Ser Thr
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Glu Val Lys His Val Thr Lys Val Glu Trp Ile Phe Ser
 165 170

<210> 6

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<213> Homo sapiens

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Met Glu Leu Leu Gln Val Thr Ile Leu Phe Leu Leu Pro Ser Ile Cys
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Ser Ser Asn Ser Thr Gly Val Leu Glu Ala Ala Asn Asn Ser Leu Val
 20 25 30

Val Thr Thr Thr Lys Pro Ser Ile Thr Thr Pro Asn Thr Glu Ser Leu
 35 40 45

Gln Lys Asn Val Val Thr Pro Thr Thr Gly Thr Thr Pro Lys Gly Thr
 50 55 60

Ile Thr Asn Glu Leu Leu Lys Met Ser Leu Met Ser Thr Ala Thr Phe
 65 70 75 80

Leu Thr Ser Lys Asp Glu Gly Leu Lys Ala Thr Thr Thr Asp Val Arg
 85 90 95

Lys Asn Asp Ser Ile Ile Ser Asn Val Thr Val Thr Ser Val Thr Leu
 100 105 110

Pro Asn Ala Val Ser Thr Leu Gln Ser Ser Lys Pro Lys Thr Glu Thr
 115 120 125

Gln Ser Ser Ile Lys Thr Thr Glu Ile Pro Gly Ser Val Leu Gln Pro
 130 135 140

Asp Ala Ser Pro Ser Lys Thr Gly Thr Leu Thr Ser Ile Pro Val Thr
 145 150 155 160

Ile Pro Glu Asn Thr Ser Gln Ser Gln Val Ile Gly Thr Glu Gly Gly
 165 170 175

Lys Asn Ala Ser Thr Ser Ala Thr Ser Arg Ser Tyr Ser Ser Ile Ile
 180 185 190

Leu Pro Val Val Ile Ala Leu Ile Val Ile Thr Leu Ser Val Phe Val
 195 200 205

Leu Val Gly Leu Tyr Arg Met Cys Trp Lys Ala Asp Pro Gly Thr Pro
 210 215 220

Glu Asn Gly Asn Asp Gln Pro Gln Ser Asp Lys Glu Ser Val Lys Leu
 225 230 235 240

Leu Thr Val Lys Thr Ile Ser His Glu Ser Gly Glu His Ser Ala Gln

245

250

255

Gly Lys Thr Lys Asn
260

<210> 7

<211> 243

<212> PRT

<213> Homo sapiens

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Met Arg Pro Gln Gly Pro Ala Ala Ser Pro Gln Arg Leu Arg Gly Leu
1 5 10 15

Leu Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala Ser Glu
20 25 30

Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg Glu Val Val
35 40 45

Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala Gly Val Pro Gly
50 55 60

Arg Asp Gly Ser Pro Gly Ala Asn Gly Ile Pro Gly Thr Pro Gly Ile
65 70 75 80

Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys Gly Glu Cys Leu Arg Glu
85 90 95

Ser Phe Glu Glu Ser Trp Thr Pro Asn Tyr Lys Gln Cys Ser Trp Ser
100 105 110

Ser Leu Asn Tyr Gly Ile Asp Leu Gly Lys Ile Ala Glu Cys Thr Phe
115 120 125

Thr Lys Met Arg Ser Asn Ser Ala Leu Arg Val Leu Phe Ser Gly Ser
130 135 140

Leu Arg Leu Lys Cys Arg Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr
145 150 155 160

Phe Asn Gly Ala Glu Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile
165 170 175

Tyr Leu Asp Gln Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His
180 185 190

Arg Thr Ser Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu
195 200 205

Val Asp Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly
210 215 220

Asp Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu
225 230 235 240

Leu Pro Lys

<210> 8
 <211> 149
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu Ile
 1 5 10 15
 Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile Ser Thr
 20 25 30
 Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys Arg Ala Ile
 35 40 45
 Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu Ser Thr Leu Glu
 50 55 60
 Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys Cys Val Thr Lys Asn
 65 70 75 80
 Leu Leu Ala Phe Tyr Val Asp Arg Val Phe Lys Asp His Gln Glu Pro
 85 90 95
 Asn Pro Lys Ile Leu Arg Lys Ile Ile Ser Ile Cys Gln Leu Phe Pro
 100 105 110
 Leu His Ala Glu Asn Ser Ala Ala Met Cys Glu Ser Leu Gly Gln Asn
 115 120 125
 Ser Ser Ile Cys Ser Leu Ser Ala Gln Gly Glu Ala Arg Lys Cys Trp
 130 135 140
 Pro Pro Ser Ala Ser
 145

<210> 9
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 <212> PRT
 <213> Homo sapiens

<400> 9
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 1 5 10 15
 Pro Leu Trp Ser Ser Ser Leu Pro Gly Leu Asp Thr Ala Glu Ser Lys
 20 25 30
 Ala Thr Ile Ala Asp Leu Ile Leu Ser Ala Leu Glu Arg Ala Thr Val
 35 40 45
 Phe Leu Glu Gln Arg Leu Pro Glu Ile Asn Leu Asp Gly Met Val Gly

50

55

60

Val Arg Val Leu Glu Glu Gln Leu Lys Ser Val Arg Glu Lys Trp Ala
65 70 75 80

Gln Glu Pro Leu Leu Gln Pro Leu Ser Leu Arg Val Gly Met Leu Gly
85 90 95

Glu Lys Leu Glu Ala Ala Ile Gln Arg Ser Leu His Tyr Leu Lys Leu
100 105 110

Ser Asp Pro Lys Tyr Leu Arg Gly Arg Thr Ala Ala Ser Pro Ala Ala
115 120 125

Ser Gln Thr Ser Ala Gly Ala Ser
130 135

<210> 10

<211> 123

<212> PRT

<213> Homo sapiens

<400> 10

Met Lys Leu Leu Leu Leu Ala Leu Pro Met Leu Val Leu Leu Pro Gln
1 5 10 15

Val Ile Pro Ala Tyr Ser Gly Glu Lys Lys Cys Trp Asn Arg Ser Gly
20 25 30

His Cys Arg Lys Gln Cys Lys Asp Gly Glu Ala Val Lys Asp Thr Cys
35 40 45

Lys Asn Leu Arg Ala Cys Cys Ile Pro Ser Asn Glu Asp His Arg Arg
50 55 60

Val Pro Ala Thr Ser Pro Thr Pro Leu Ser Asp Ser Thr Pro Gly Ile
65 70 75 80

Ile Asp Asp Ile Leu Thr Val Arg Phe Thr Thr Asp Tyr Phe Glu Val
85 90 95

Ser Ser Lys Lys Asp Met Val Glu Glu Ser Glu Ala Gly Arg Gly Thr
100 105 110

Glu Thr Ser Leu Pro Asn Val His His Ser Ser
115 120

<210> 11

<211> 163

<212> PRT

<213> Homo sapiens

<400> 11

Met Gly Gly Leu Leu Leu Ala Ala Phe Leu Ala Leu Val Ser Val Pro
1 5 10 15

Arg Ala Gln Ala Val Trp Leu Gly Arg Leu Asp Pro Glu Gln Leu Leu
 20 25 30

Gly Pro Trp Tyr Val Leu Ala Val Ala Ser Arg Glu Lys Gly Phe Ala
 35 40 45

Met Glu Lys Asp Met Lys Asn Val Val Gly Val Val Val Thr Leu Thr
 50 55 60

Pro Glu Asn Asn Leu Arg Thr Leu Ser Ser Gln His Gly Leu Gly Gly
 65 70 75 80

Cys Asp Gln Ser Val Met Asp Leu Ile Lys Arg Asn Ser Gly Trp Val
 85 90 95

Phe Glu Asn Pro Ser Ile Gly Val Leu Glu Leu Trp Val Leu Ala Thr
 100 105 110

Asn Phe Arg Asp Tyr Ala Ile Ile Phe Thr Gln Leu Glu Phe Gly Asp
 115 120 125

Glu Pro Phe Asn Thr Val Glu Leu Tyr Ser Leu Thr Glu Thr Ala Ser
 130 135 140

Gln Glu Ala Met Gly Leu Phe Thr Lys Trp Ser Arg Ser Leu Gly Phe
 145 150 155 160

Leu Ser Gln

<210> 12

<211> 301

<212> PRT

<213> Homo sapiens

<400> 12

Met Ala Arg His Gly Leu Pro Leu Leu Pro Leu Leu Ser Leu Leu Val
 1 5 10 15

Gly Ala Trp Leu Lys Leu Gly Asn Gly Gln Ala Thr Ser Met Val Gln
 20 25 30

Leu Gln Gly Gly Arg Phe Leu Met Gly Thr Asn Ser Pro Asp Ser Arg
 35 40 45

Asp Gly Glu Gly Pro Val Arg Glu Ala Thr Val Lys Pro Phe Ala Ile
 50 55 60

Asp Ile Phe Pro Val Thr Asn Lys Asp Phe Arg Asp Phe Val Arg Glu
 65 70 75 80

Lys Lys Tyr Arg Thr Glu Ala Glu Met Phe Gly Trp Ser Phe Val Phe
 85 90 95

Glu Asp Phe Val Ser Asp Glu Leu Arg Asn Lys Ala Thr Gln Pro Met

100	105	110
Lys Ser Val Leu Trp Trp Leu Pro Val Glu Lys Ala Phe Trp Arg Gln		
115	120	125
Pro Ala Gly Pro Gly Ser Gly Ile Arg Glu Arg Leu Glu His Pro Val		
130	135	140
Leu His Val Ser Trp Asn Asp Ala Arg Ala Tyr Cys Ala Trp Arg Gly		
145	150	155 160
Lys Arg Leu Pro Thr Glu Glu Glu Trp Glu Phe Ala Ala Arg Gly Gly		
165	170	175
Leu Lys Gly Gln Val Tyr Pro Trp Gly Asn Trp Phe Gln Pro Asn Arg		
180	185	190
Thr Asn Leu Trp Gln Gly Lys Phe Pro Lys Gly Asp Lys Ala Glu Asp		
195	200	205
Gly Phe His Gly Val Ser Pro Val Asn Ala Phe Pro Ala Gln Asn Asn		
210	215	220
Tyr Gly Leu Tyr Asp Leu Leu Gly Asn Val Trp Glu Trp Thr Ala Ser		
225	230	235 240
Pro Tyr Gln Ala Ala Glu Gln Asp Met Arg Val Leu Arg Gly Ala Ser		
245	250	255
Trp Ile Asp Thr Ala Asp Gly Ser Ala Asn His Arg Ala Arg Val Thr		
260	265	270
Thr Arg Met Gly Asn Thr Pro Asp Ser Ala Ser Asp Asn Leu Gly Phe		
275	280	285
Arg Cys Ala Ala Asp Ala Gly Arg Pro Pro Gly Glu Leu		
290	295	300

<210> 13

<211> 69

<212> PRT

<213> Homo sapiens

<400> 13

Met Cys Trp Leu Arg Ala Trp Gly Gln Ile Leu Leu Pro Val Phe Leu
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Ser Leu Phe Leu Ile Gln Leu Leu Ile Ser Phe Ser Glu Asn Gly Phe
20 25 30

Ile His Ser Pro Arg Asn Asn Gln Lys Pro Arg Asp Gly Asn Glu Glu
35 40 45

Glu Cys Ala Val Lys Lys Ser Cys Gln Leu Cys Thr Glu Asp Lys Lys
50 55 60

Tyr Met Met Asn Arg
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<210> 14

<211> 69

<212> PRT

<213> Homo sapiens

<400> 14

Met Gly Phe Pro Ala Ala Ala Leu Leu Cys Ala Leu Cys Cys Gly Leu
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Leu Ala Pro Ala Ala Arg Ala Gly Tyr Ser Glu Glu Arg Cys Ser Trp
20 25 30

Arg Gly Arg Pro Arg Arg Thr Arg Thr Ser Ala Ala Ala Trp Pro Pro
35 40 45

Ser Ala Leu Ser Cys Ala Arg Thr Gly Ala Pro Ser Cys Pro Arg Arg
50 55 60

Pro Thr Val Ser Ala
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<210> 15

<211> 197

<212> PRT

<213> Homo sapiens

<400> 15

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1 5 10 15

Leu Cys Gly Ser Ile Thr Leu Ala Leu Gly Asn Ala Gln Lys Leu Pro
20 25 30

Lys Gly Lys Arg Pro Asn Leu Lys Val His Ile Asn Thr Thr Ser Asp
35 40 45

Ser Ile Leu Leu Lys Phe Leu Arg Pro Ser Pro Asn Val Lys Leu Glu
50 55 60

Gly Leu Leu Leu Gly Tyr Gly Ser Asn Val Ser Pro Asn Gln Tyr Phe
65 70 75 80

Pro Leu Pro Ala Glu Gly Lys Phe Thr Glu Ala Ile Val Asp Ala Glu
85 90 95

Pro Lys Tyr Leu Ile Val Val Arg Pro Ala Pro Pro Pro Ser Gln Lys
100 105 110

Lys Ser Cys Ser Gly Lys Thr Arg Ser Arg Lys Pro Leu Gln Leu Val
115 120 125

Val Gly Thr Leu Thr Pro Ser Ser Val Phe Leu Ser Trp Gly Phe Leu

130

135

140

Ile Asn Pro His His Asp Trp Thr Leu Pro Ser His Cys Pro Asn Asp
 145 150 155 160

Arg Phe Tyr Thr Ile Arg Tyr Arg Glu Lys Asp Lys Glu Lys Lys Trp
 165 170 175

Ile Phe Gln Ile Cys Pro Ala Thr Glu Thr Ile Val Glu Asn Leu Lys
 180 185 190

Pro Asn Thr Ser Leu
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<211> 378

<212> DNA

<213> Homo sapiens

<400> 16

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<210> 17

<211> 366

<212> DNA

<213> Homo sapiens

<400> 17

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 cccaagagga agaacacgtg gaacttcttg aaatgcgcct acatggtgat gacctacctc 300
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 ctgtaa 366

<210> 18

<211> 672

<212> DNA

<213> Homo sapiens

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cccacagcca	aacctaccca	gcctggaccc	aggcccggag	ggaatgagga	agcaaagaag	600
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ttccgagggg	ga					672

<210> 19

<211> 747

<212> DNA

<213> Homo sapiens

<400> 19

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tgtaatgtgc	tgagcacaga	gctacaggcg	gaactgagtc	gcaccggctc	atctcgagag	180
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aattttctct	gtgaaggtca	tgtgctccca	gctgctgaaa	ctgcatgtct	acaggaaact	600
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gaggaggagg	aagaggagga	agaggaaggg	ggagacaaga	tgaccaagac	aggaagccac	720
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<210> 20

<211> 522

<212> DNA

<213> Homo sapiens

<400> 20

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ggatgtgttt	tccagagcac	agaagacaaa	tgtatattca	agatagactg	gactctgtca	180
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attgggcgct	tccagaaccg	cgtacacttg	atgggggaca	tcttatgcaa	tgatggctct	300
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aaaggggaga	gccaggtgtt	caagaaggcg	gtggtactgc	atgtgcttcc	agaggagccc	420
aaagagctca	tgggtccatgt	gggtggattg	attcagatgg	gatgtgtttt	ccagagcaca	480
gaagtgaac	acgtgaccaa	ggtagaatgg	atattttcat	ga		522

<210> 21

<211> 786

<212> DNA

<213> Homo sapiens

<400> 21

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acaacaccaa	acacagaatc	attacagaaa	aatgttgtca	caccaacaac	tggacaact	180
cctaaaggaa	caatcaccaa	tgaattactt	aaaatgtctc	tgatgtcaac	agctactttt	240
ttaacaagta	aagatgaagg	attgaaagcc	acaaccactg	atgtcaggaa	gaatgactcc	300

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atcatttcaa acgtaacagt aacaagtgtt acacttccaa atgctgtttc aacattacaa 360
agttccaaac ccaagactga aactcagagt tcaattaaaa caacagaaat accaggtagt 420
gttctacaac cagatgcatc accttctaaa actggtacat taacctcaat accagttaca 480
attccagaaa acacctcaca gtctcaagta ataggcactg aggggtgaaa aaatgcaagc 540
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gtaataacac tttcagatatt tgttctgggt gggttggtacc gaatgtgctg gaaggcagat 660
ccgggcacac cagaaaatgg aaatgatcaa cctcagtcctg ataaagagag cgtgaagctt 720
cttaccgtta agacaatttc tcatgagtc tggtagcact ctgcacaagg aaaaaccaag 780
aactga

```

<210> 22
 <211> 732
 <212> DNA
 <213> Homo sapiens

```

<400> 22
atgcgacccc agggccccgc cgctccccg cagcggtccc gcggcctcct gctgctcctg 60
ctgctgcagc tgcccgcgcc gtcgagcgcc tctgagatcc ccaaggggaa gcaaaaggcg 120
cagctccggc agagggaggt ggtggacctg tataatggaa tgtgcttaca agggccagca 180
ggagtgcctg gtcgagacgg gagccctggg gccaatggca ttccgggtac acctgggatc 240
ccaggtcggg atggattcaa aggagaaaag ggggaatgtc tgagggaaaag ctttgaggag 300
tcctggacac ccaactacaa gcagtgttca tggagtccat tgaattatgg catagatcct 360
gggaaaattg cggagtgtac atttacaagg atgcgttcaa atagtgtcct aagagttttg 420
ttcagtggct cacttcggct aaaatgcaga aatgcatgct gtcagcgttg gtatttcaca 480
ttcaatggag ctgaatgttc aggacctctt cccattgaag ctataattta tttggaccac 540
ggaagccctg aaatgaattc aacaattaat attcatcgca cttcttctgt ggaaggactt 600
tgtgaaggaa ttggtgctgg attagtggat gttgctatct gggttggcac ttgttcagat 660
tacccaaaag gagatgcttc tactggatgg aattcagttt ctgcacatcat tattgaagaa 720
ctaccaaatt aa

```

<210> 23
 <211> 450
 <212> DNA
 <213> Homo sapiens

```

<400> 23
atgaagttag agtgtgtttc cctttggctc ctgggtacaa tactgatatt gtgctcagta 60
gacaaccacg gtctcaggag atgtctgatt tccacagaca tgcaccatat agaagagagt 120
ttccaagaaa tcaaaagagc catccaagct aaggacacct tcccaaagt cactatcctg 180
tccacattgg agactctgca gatcattaag cccttagatg tgtgctgctg gaccaagaac 240
ctcctggcgt tctacgtgga cagggtgttc aaggatcatc aggagccaaa ccccaaaatc 300
ttgagaaaaa tcatcagcat ttgccaactc ttctctctac atgcagaaaa ctctgcggca 360
atgtgtgagt cactgggtca gaattccagc atctgctccc tgtctgccc aggagaggcc 420
aggaagtgtc ggcccccatc ggccctctga

```

<210> 24
 <211> 411
 <212> DNA
 <213> Homo sapiens

```

<400> 24
atggccagcc tggggctgct gctcctgctc ttactgacag cactgccacc gctgtggtcc 60
tcctcactgc ctgggctgga cactgctgaa agtaaagcca ccattgcaga cctgatcctg 120
tctgcgctgg agagagccac cgtcttctca gaacagagggc tgcctgaaat caacctggat 180

```

```

gctgatggct ctgccaatca ccggggcccg gtcaccacca ggatgggcaa cactccagat 840
tcagcctcag acaacctcgg tttccgctgt gctgcagacg caggccggcc gccaggggag 900
ctgtaa                                           906

```

```

<210> 28
<211> 210
<212> DNA
<213> Homo sapiens

```

```

<400> 28
atgtgctggc tgcgggcatg gggccagatc ctcttgccag ttttctctc cctctttctc 60
atccaattgc ttatcagctt ctgagagaat ggttttatcc acagccccag gaacaatcag 120
aaaccaagag atgggaatga agaggaatgt gctgtaaaga agagttgtca attgtgcaca 180
gaagataaga aatatatgat gaatagataa                                210

```

```

<210> 29
<211> 210
<212> DNA
<213> Homo sapiens

```

```

<400> 29
atggggttcc cggccgcggc gctgctctgc gcgctgtgct gcggcctcct ggccccggct 60
gcccgcgcgc gctactccga ggagcgtctg agctggaggg gcaggccacg ccgcaccagg 120
acatcagccg ccgcgtggcc gccttcctgt ttgagctgcg cgaggacggg cgccccgagc 180
tgcccccgca ggcccacggt ctggcgtag                                210

```

```

<210> 30
<211> 594
<212> DNA
<213> Homo sapiens

```

```

<400> 30
atgcgaggtg gcaaatgcaa catgctctcc agtttggggt gtctacttct ctgtggaagt 60
attacactag ccctgggaaa tgcacagaaa ttgccaaaag gtaaaaggcc aaacctcaaa 120
gtccacatca ataccacaag tgactccatc ctcttggaagt tcttgcgctc aagtccaaat 180
gtaaagcttg aaggtcttct cctgggatat ggcagcaatg tatcacaaa ccagtacttc 240
cctcttcccg ctgaaggga attcacagaa gctatagttg atgcagagcc gaaatatctg 300
atagttgtgc gacctgctcc acctccaagt caaaagaagt catgttcagg taaaactcgt 360
tctcgcaaac ctctgcagct ggtggttggc actctgacac cgagctcggg ctctctgtcc 420
tggggtttcc tcatcaacc acaccatgac tggacattgc caagtcactg tcccaatgac 480
agattttata caattcgcta tcgagaaaag gataaagaaa agaagtggat ttttcaaata 540
tgtccagcca ctgaaacaat tgtggaaaac ctaaagccca acacaagttt atga      594

```

```

<210> 31
<211> 25
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Description of Artificial Sequence: Primer

```

```

<400> 31
atggccaagt acctggccca gatca                                25

```

<210> 32
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 32
tcacgtatgg ggcacatctgcc ctttt 25

<210> 33
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 33
atgcacagat cagagccatt tctga 25

<210> 34
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 34
ttacagtagt ggcagtaaca cttgg 25

<210> 35
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 35
atgaagttcg tcccctgcct cctgc 25

<210> 36
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 36
tcaccctcgg aagaagctga tgaga 25

<210> 37
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 37
atgggacctg tgcggttggg aatat 25

<210> 38
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 38
tcaaagatct tctcgggtcaa gtttg 25

<210> 39
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 39
atgttttgcc cactgaaact catcc 25

<210> 40
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
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<400> 40
tcatgaaaat atccattcta ccttg 25

<210> 41
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 41

atggaactgc ttcaagtgac cattc

25

<210> 42

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 42

tcagttcttg gtttttcctt gtgca

25

<210> 43

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 43

atgcgacccc agggccccgc cgcct

25

<210> 44

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 44

ttatatttggt agttcttcaa taatg

25

<210> 45

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 45

atgaagttac agtggttttc ccttt

25

<210> 46

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 46
tcaggaggcc gatgggggcc agcac 25

<210> 47
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 47
atggccagcc tggggctgct gctcc 25

<210> 48
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 48
tcatgaggct cctgcagagg tctga 25

<210> 49
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 49
atgaaactcc tgctgctggc tcttc 25

<210> 50
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 50
tcatgagcta tggatgaacat ttgga 25

<210> 51
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 51
atgggcggcc tgctgctggc tgctt 25

<210> 52
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 52
ctactgtgac aggaagccca ggctc 25

<210> 53
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 53
atggcccggc atgggttacc gctgc 25

<210> 54
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 54
ttacagctcc cctggcggcc ggcct 25

<210> 55
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 55
atgtgctggc tgcgggcatg gggcc 25

<210> 56
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 56
ttatctattc atcatatatt tctta 25

<210> 57
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 57
atggggttcc cggccgcggc gctgc 25

<210> 58
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 58
ctacgccgag accgtgggcc tgcgg 25

<210> 59
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 59
atgcgaggtg gcaaatacaa catgc 25

<210> 60
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 60

tcataaactt gtgttgggct ttagg

25

<210> 61

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 61

tcggaattcg ccatggccaa gtacctggcc cagatc

36

<210> 62

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 62

acgctcgagt tacttgtcat cgctgcctt gtagtcgta tggggcatct gccctttttc 60

<210> 63

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 63

tcggaattcg ccatggccag cctggggctg ctgctc

36

<210> 64

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 64

acgctcgagt tacttgtcat cgctgcctt gtagtctgag gctcctgcag aggtctgaga 60

<210> 65

<211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 65
 tcggaattca ccatgaaact cctgctgctg gctctt 36

<210> 66
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 66
 acgctcgagt tacttgctcat cgctgcctt gtagtctgag ctatggtgaa catttggaag 60

<210> 67
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 67
 tagacgaatt cccaccatgg gacctgtgcg gttgggaata ttgc 44

<210> 68
 <211> 57
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 68
 aggcaagtcg acaagatctt ctcggtcaag tttggggtgg cttcctgtct tggtcatt 57

<210> 69
 <211> 51
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<400> 69
 gtgtagaatt cccaccatgg gcggcctgct gctggctgct tttctggctt t 51

<210> 70
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 70
ctgggcgtcg acctgtgaca ggaagcccag gctcctgctc cact 44

<210> 71
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic FLAG
tag

<400> 71
Asp Tyr Lys Asp Asp Asp Asp Lys
1 5



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